We claim:

1. A method of simultaneously measuring at least two optical properties of emitted light from at least one sample in a plurality of addressable wells of a multiwell plate comprising the steps of,

   iv) aligning a plurality of addressable wells of a multiwell plate to a plurality of ball lenses;

   v) directing electromagnetic radiation substantially coaxially through the symmetry axis of each of said plurality of ball lenses,

   vi) detecting the emitted light focused by said plurality of ball lenses from said at least one sample.

2. The method of claim 1, wherein said electromagnetic radiation is directed to said plurality of ball lenses by at least one laser.

3. The method of claim 1, wherein said electromagnetic radiation is directed to said plurality of ball lenses by at least one fiber optic bundle.

4. The method of claim 1, wherein said emitted light focused by said plurality of ball lenses is directed to at least one detector through at least one fiber optic bundle.

5. A device, comprising:

   i) a liquid handler comprising at least one pipetting tip, said at least one pipetting tip comprising programmable control of aspiration from a first plurality of addressable wells of a first multiwell plate and programmable control of dispensation into a second plurality of addressable wells of a second multiwell plate,

   ii) an optical detector module comprising at least one detector, said at least one detector being in optical connection to said second plurality of addressable wells of said second multiwell plate and, said detector module simultaneously

detecting at least two optical properties from each well of said second plurality of addressable wells of said second multiwell plate,

iii) a programmable moving conveying surface to align said first multiwell plate and said second multiwell plate to said liquid handler, and said detector module, and to move said first multiwell plate and said second multiwell plate into and out of said device,

iv) a data processing and control module for coordinating the operation of said automatic measuring device,

wherein said data processing and control module coordinates said programmable moving conveying surface to move said second plurality of addressable wells of said second multiwell plate to said liquid handler,

wherein said liquid handler simultaneously dispenses into said second addressable wells of said second multiwell plate and said detector module simultaneously measures at least two optical properties from each well of said second plurality of addressable wells of said second multiwell plate,

and wherein, said data processing and control module collects data from said detector module.

6. The device of claim 5, wherein said data processing and control module intermittently collects data from said detector module.

7. The device of claim 5, wherein said liquid handler dispenses into said second addressable wells of said second multiwell plate and there is a predefined delay before said detector module simultaneously detects at least two optical properties from each well of a plurality of said second plurality of addressable wells of said second multiwell plate.

8. The device of claim 5, wherein the optical property is light emission at a particular wavelength.

9. The device of claim 5, further comprising a optical irradiation module comprising at least one light source, wherein said at least one light source irradiates said second plurality of addressable wells of said multiwell plate.

10. The device of claim 5, wherein said at least one light source irradiates said second plurality of addressable wells of said multiwell plate intermittently.

11. The device of claim 5, wherein, said at least one light source is programably controlled to irradiate said second plurality of addressable wells of said multiwell plate at predefined times.

12. The device of claim 5, wherein said detector module further comprises at least one fiber optic bundle.

13. The device of claim 8, wherein said at least one fiber optic bundle comprises at least one trifurcated fiber optic bundle.

14. The device of claim 5, wherein said detector module further comprises at least one ball lens.

15. The device of claim 10, wherein said at least one ball lens is formed of a material selected from the group consisting of glass, fused silica, quartz and sapphire.

16. The device of claim 11, wherein said at least one ball lens further comprises an anti-reflective coating.

17. The device of claim 10, wherein said detector module further comprises at least one trifurcated fiber optic bundle, said at least one trifurcated fiber optic bundle having a diameter that is one third the diameter of said at least one ball lens.

18. The device of claim 10, wherein said detector module further comprises at least one trifurcated fiber optic bundle, said at least one trifurcated fiber optic bundle comprising at least one central optical fiber that is in direct optical communication with said at least one light source, and wherein said at least one central fiber optic bundle is coaxially aligned to said at least one ball lens.

19. A device, comprising:

i) an optical detector module comprising at least one detector, said at least one detector being in optical connection to a plurality of addressable wells of a multiwell plate and, said detector module simultaneously detecting at any instant, at least two optical properties from each well of said plurality of addressable wells of said multiwell plate,

ii) a optical irradiation module comprising at least one light source, wherein said at least one light source irradiates said plurality of addressable wells of said multiwell plate,

iii) a programmable moving conveying surface to align said plurality of addressable wells of said multiwell plate to said detector module, and to move said plurality of addressable wells of said multiwell plate into and out of said device,

iv) an integration and control module for coordinating the operation of said automatic measuring device,

wherein said data processing and control module coordinates said programmable moving conveying surface to move said plurality of addressable wells of said multiwell plate to said detector module,

wherein said detector module simultaneously detects at least two optical properties from each well of said second plurality of addressable wells of said second multiwell plate and,

wherein said data processing and control module collects data from said detector module.

20. The device of claim 19, wherein said data processing and control module intermittently collects data from said detector module.

21. The device of claim 19, wherein the optical property is light emission at a particular wavelength.

22. The device of claim 19, wherein said at least one light source irradiates said plurality of addressable wells of said multiwell plate intermittently.

23. The device of claim 19, wherein. said at least one light source is programably controlled to irradiate said plurality of addressable wells of said multiwell plate at predefined times.

24. The device of claim 19, wherein said detector module further comprises at least one fiber optic bundle.

25. The device of claim 24, wherein said at least fiber optic bundle comprises a trifurcated fiber optic bundle.

26. The device of claim 19, wherein said detector module further comprises at least one ball lens.

27. The device of claim 26, wherein said at least one ball lens is formed of a material selected from the group consisting of glass, fused silica, quartz and sapphire.

28. The device of claim 27, wherein said at least one ball lens further comprises an anti-reflective coating.

29. The device of claim 25, wherein said detector module further comprises at least one trifurcated fiber optic bundle, said at least one trifurcated fiber optic bundle having a diameter that is one third the diameter of said at least one ball lens.

30. The device of claim 25, wherein said detector module further comprises at least one trifurcated fiber optic bundle, said at least one trifurcated fiber optic bundle comprising a central optical fiber bundle that is in direct optical communication with said at least one light source, and wherein said central fiber optic bundle is coaxially aligned to said at least one ball lens.

31. The device of claim 25 wherein said at least one ball lens is about three times larger in diameter than said addressable wells of said multiwell plate.

32. The device of claim 25 wherein said at least one ball lens is about the same diameter as said addressable wells of said multiwell plate.

33. An optical assembly, comprising a ball lens and a trifurcated fiber adapted for dual optical interrogation and in optical communication with said ball lens.

34. The optical assembly of claim 33, wherein said trifurcated fiber comprises a first optically isolated emission bundle to collect light, second optically isolated emission bundle to collect light, and an excitation bundle.

35. The optical assembly of claim 34, wherein said ball lens is separated from said trifurcated fiber by a transmission space.

36. The optical assembly of claim 35, wherein said ball lens comprises a sapphire material.

37. The optical assembly of claim 36, wherein said ball lens comprises an anti-reflective coating.

38. The optical assembly of claim 33, wherein said trifurcated fiber comprises a first plurality of emission bundles for receiving light of a first wavelength and second

plurality of emission bundles for receiving light of a second wavelength and said first plurality of emission bundles and said second plurality of emission bundles are randomly distributed in plurality of excitation bundles.

39. The optical assembly of claim 33, wherein said trifurcated fiber comprises a first set of bundles for transmitting light of a first wavelength and second set of bundles for transmitting light of a second wavelength and third set of bundles for transmitting light of a third wavelength.

40. The optical assembly of claim 39, wherein said trifurcated fiber is separated from said ball lens by a transmission space of about .1mm to 1mm.

41. The optical assembly of claim 35, wherein said ball lens comprises either sapphire material or a silica material.

42. The optical assembly of claim 39, wherein said first set of bundles and said second set of bundles are coaxially arranged with respect to said third set of bundles.

43. An optical detection system, comprising:

a) a light source that launches at least one predetermined wavelength of light,
b) sample holder,
c) a ball lens at a predetermined interrogation distance from said sample holder,
d) a trifurcated fiber adapted for dual optical interrogation and in optical communication with said ball lens, and
e) a detector that detects light of at least one desired wavelength and in optical communication with said ball lens.

44. The optical detection system of claim 43, wherein said trifurcated fiber comprises a first plurality of emission bundles for receiving light of a first wavelength and second plurality of emission bundles for receiving light of a second wavelength and said first

plurality of emission bundles and said light source launches at least one predetermined wavelength of excitation light at said sample holder.

45. The optical detection system of claim 43, wherein said ball lens is at a predetermined transmission distance from said trifurcated fiber and further comprising at least one positioner to controllably change said predetermined transmission distance.

46. The optical detection system of claim 43, further comprising at least one positioner to controllably change said predetermined interrogation distance.

47. The optical detection system of claim 43, further comprising a liquid handling unit to dispense liquids into addressable wells.

48. The optical detection system of claim 43, further comprising a light activation system for triggering liquid handling unit to dispense liquids into addressable wells.

49. The optical detection system of claim 43, wherein said light source launches light through said trifurcated fiber to the location at least one addressable well in a sample in said sample holder to monitor epifluorescence.

50. The optical detection system of claim 49, further comprising a computer control system to manage interrogation of a sample.

51. The optical detection system of claim 49, further comprising a sample transfer system to transfer at least one sample platform to said sample holder.

52. The optical detection system of claim 49, wherein said sample holder further comprises a positioning system.

53. The optical detection system of claim 43, wherein said ball lens is at a predetermined transmission distance from said trifurcated fiber that approximately corresponds to a focal length.

54. The optical detection system of claim 43, wherein said trifurcated fiber comprises an end and said end is generally at a focal plane of said ball lens.

55. The optical detection system of claim 43, wherein an object to be interrogated is generally at a focal plane of said ball lens.

56. An optical fiber assembly, comprising a trifurcated fiber comprising a first plurality of emission bundles for receiving light of a first wavelength and second plurality of emission bundles for receiving light of a second wavelength and said first plurality of emission bundles and said second plurality of emission bundles are non- randomly distributed in plurality of excitation bundles.

57. The optical fiber assembly of claim 56, wherein said first set of bundles and said second set of bundles are coaxially arranged with respect to said third set of bundles.

58. The optical fiber assembly of claim 56, wherein said first set of bundles is coaxially arranged with respect to said second set of bundles.

59. A method of identifying a useful chemical, comprising interrogating a sample comprising a chemical of interest with one of the above claimed devices, and detecting the activity of said chemical from optical signals from said device.

60. A method of development for a therapeutic, comprising interrogating a sample comprising a chemical with of interest one of the above claimed devices, detecting the activity of said chemical from optical signals from said device, administering said chemical or a chemical derived from the structure or activity of said chemical to a cell, invertebrate or mammal, assessing a therapeutic effect of said administering and

optionally adding a suitable pharmaceutical carrier to said chemical for administration into a vertebrate or human.

61. A chemical identified by a process of detecting optical signals from one of the above claimed devices, wherein said chemical is in a sample interrogated by said device.

62. A pharmaceutical composition, comprising a pharmaceutical acceptable carrier and a chemical identified by detecting optical signals from one of the above claimed devices, wherein said chemical is in a sample interrogated by said device.